Quality Accurance Plan on a Linear Accelerator (LINAC) Plane on Nasopharinx Cancer (NFC) by using Prowess Panther 5.10 at Radiotherapy Installation Ken Saras Hospital

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ABSTRACT

In this study, we calculate the output dose of LINAC in case of Nasopharyngeal Cancer and matched with result of Treatment Planning System (TPS) using Prowess Panther 5.10. This study used Siemens LINAC Type Primus MACH Series 5633 and a set of detectors used to measure radiation output. This research use sample in case of Nasopharynx Cancer with 8 field, total dose 5000 cGy divided into 25 fractions with 200 cGy dose per fraction. The 8 fields are irradiated with a target on a detector device consisting of 729 detectors. It is then accumulated with PTW-Verisoft software by plotting the results obtained from the detector tool with PTW (phantom) which we have CT Scan first in PTW-Verisoft. Obtained from a total of 729 detectors, which were exposed to radiation of 372 detectors (57.1%). Of the total detectors exposed to the radiation, the detector corresponding to PTW (phantom) is 372 detectors (100%). With unsuitable detector of 0 detectors (0.00%). It is proved that the planning is 100% match for Nasopharynx Cancer with 8 fields of radiations.

Keywords: Quality Assurance, Treatment Planning System, Nasopharyngeal Cancer, Radiotherapy